



Geographic Innovations for the 2020 Census: Reengineering Address Canvassing

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2020 Census Key Innovation Areas

Overarching Goal: To count everyone once, only once, and in the right place

Challenge Goal: To conduct the 2020 Census at a lower cost per housing unit (adjusted for inflation) than the 2010 Census, while maintaining high quality results

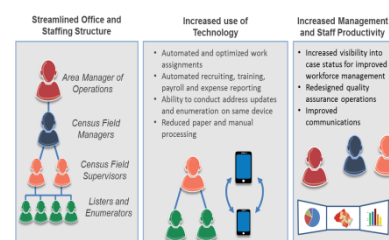
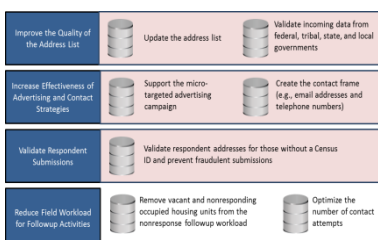
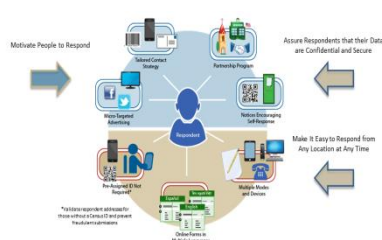
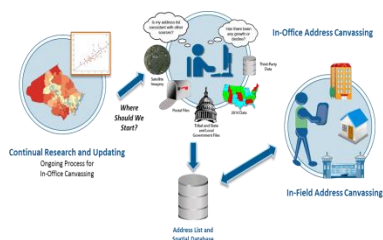
Focus on Four Key Innovation Areas

Reengineering
Address Canvassing

Optimizing
Self-Response

Utilizing
Administrative
Records and Third-
Party Data

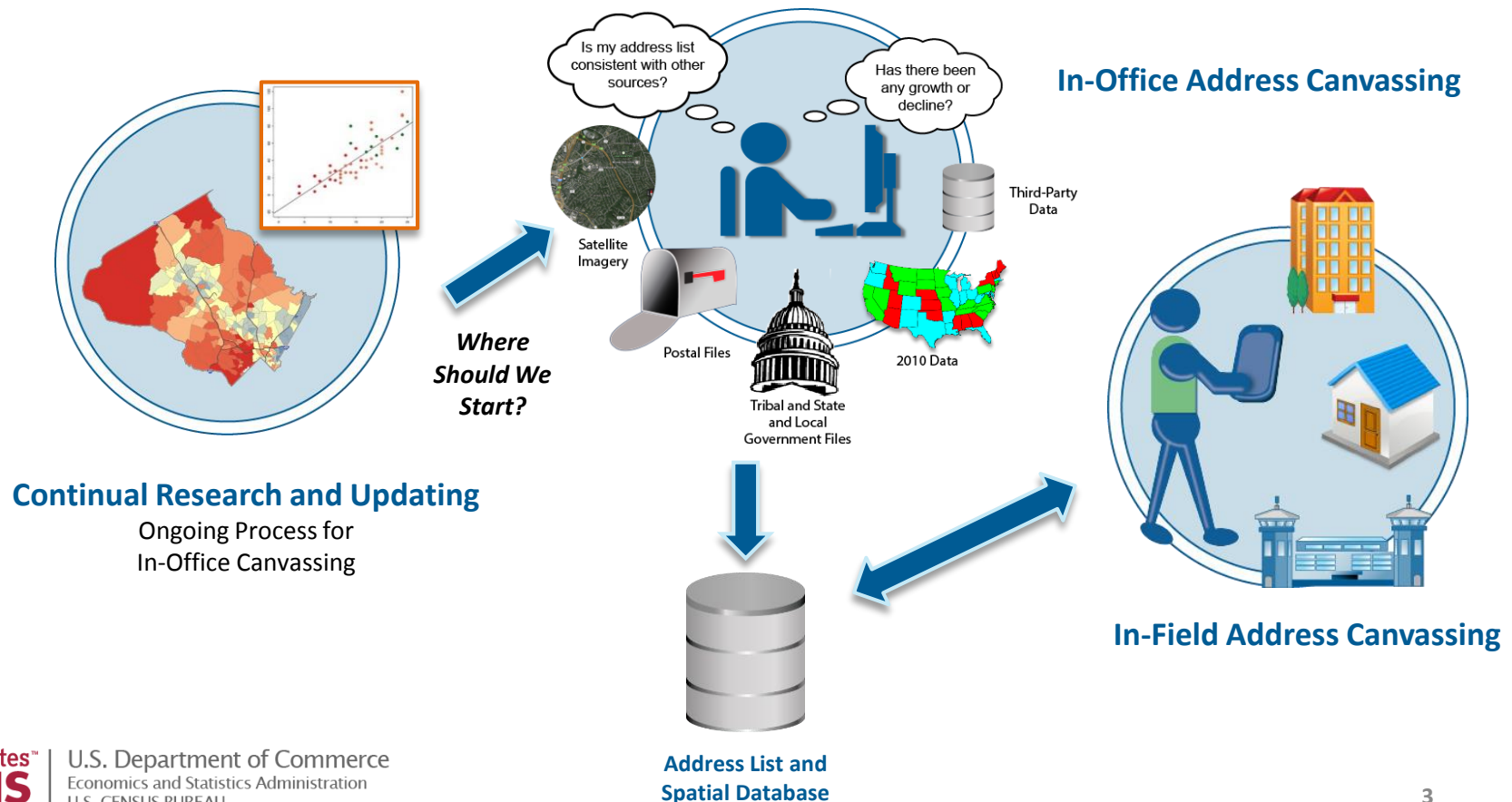
Reengineering Field
Operations



2020 Census:

Reengineering Address Canvassing

Reduce the nationwide In-Field Address Canvassing by developing innovative methodologies for updating and maintaining the Census Bureau's address list and spatial database throughout the decade



Reengineering Address Canvassing:

In-Office Address Canvassing

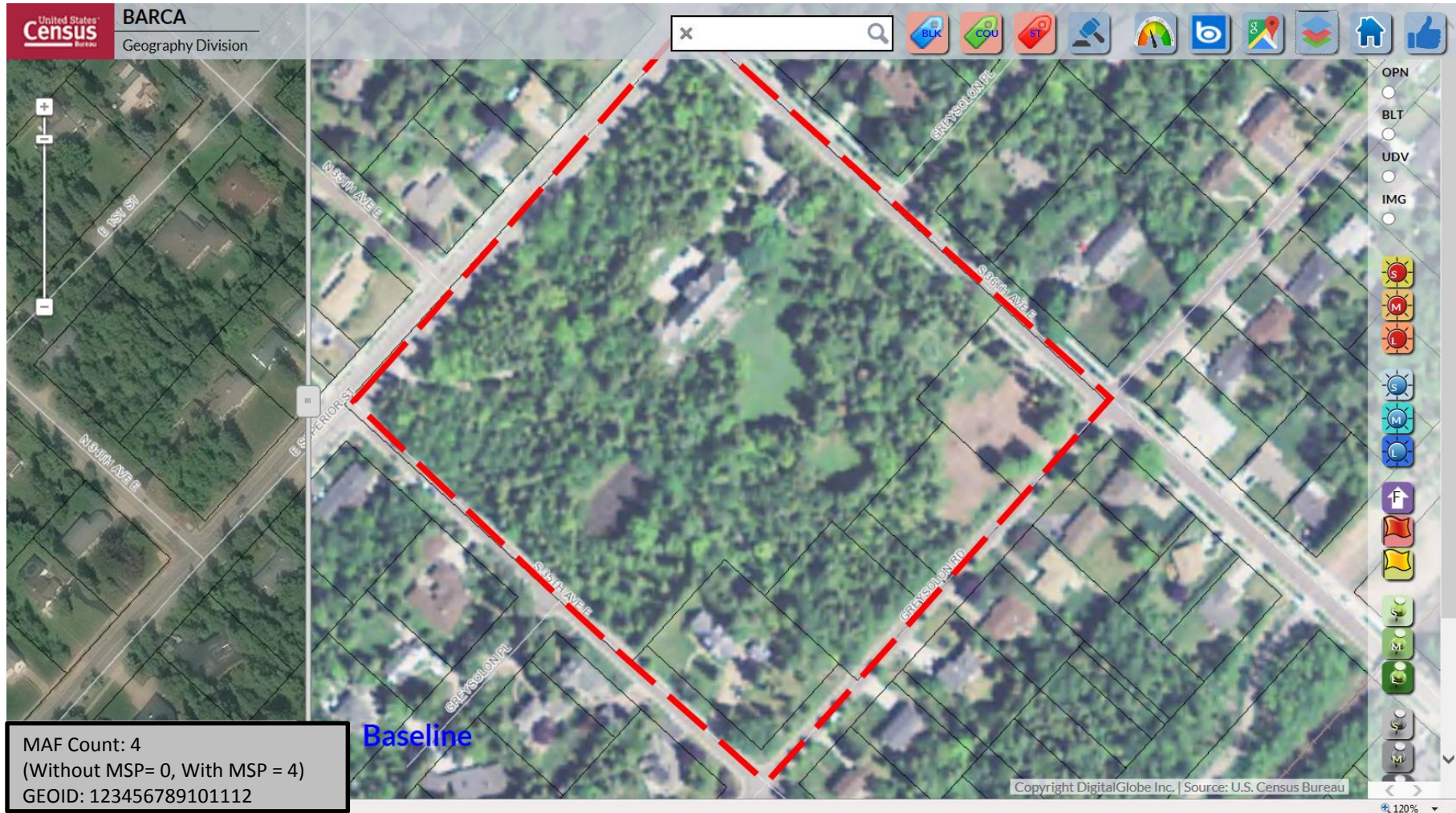
- 100 percent review in the office
- The goal of In-Office Address Canvassing is to manage as much of the review, validation, and updating of the address list as possible in the office, allowing resources to be focused on areas in which fieldwork is necessary to assure a complete and accurate address list

In-Office Address Canvassing:

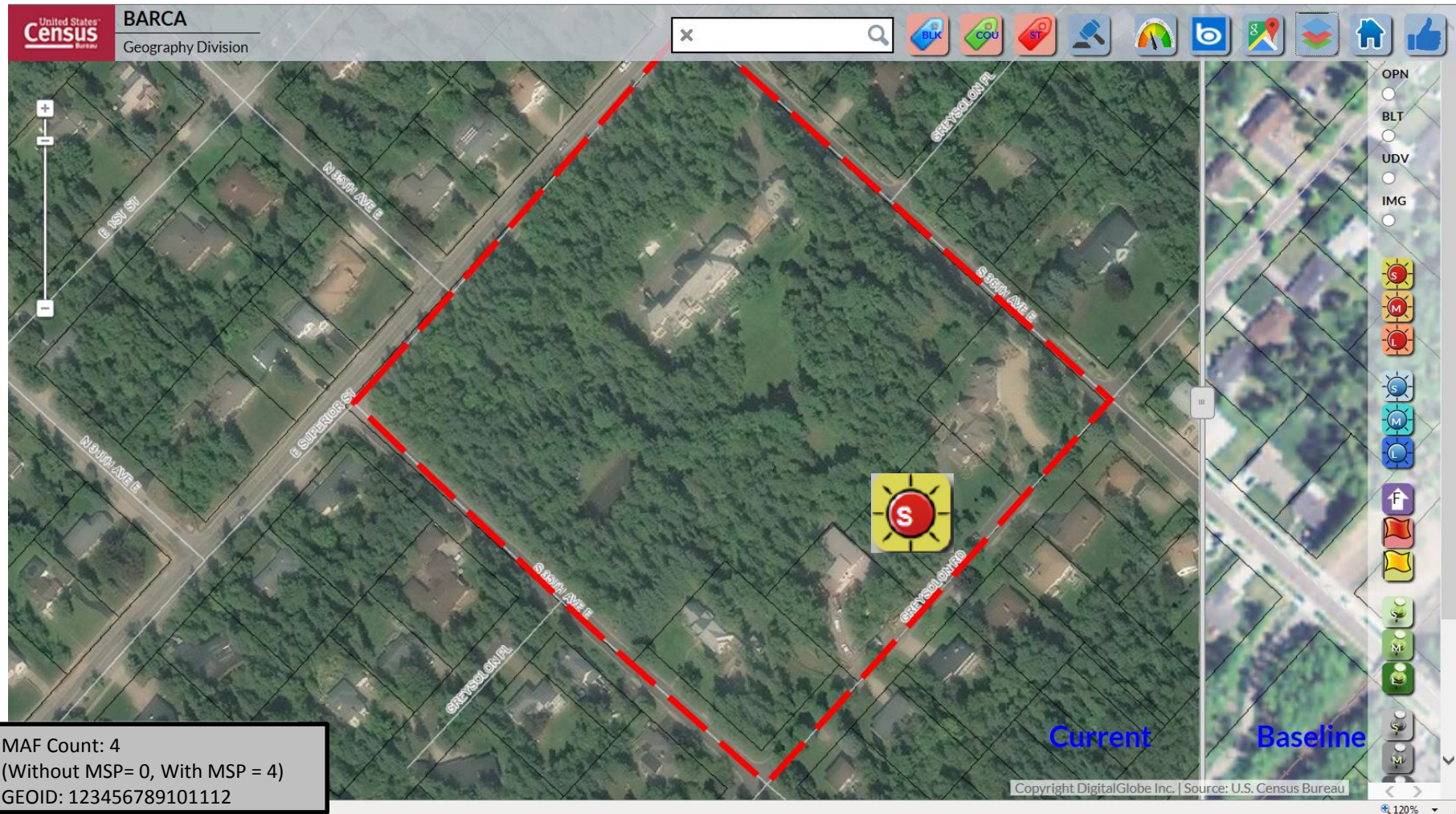
Interactive Review

- Operational Design and Development: Fiscal Year 2015
- Started Execution: September 2015
- Completed Execution: June 8, 2017
- Project Goal: 11,155,486 - All US Blocks
 - Stable: 7,921,288 (71%)
 - Active: 1,893,310 (17%)
 - Hold: 1,340,888 (12%)
 - Time per Review: 1.12 minutes

Baseline Imagery



Interactive Review: Current Imagery



Interactive Review:

Block Assessment, Research and Classification Application (BARCA)



This graphic contains no Title 13 data

Interactive Review:

Block Status



Built-Out



Open Space

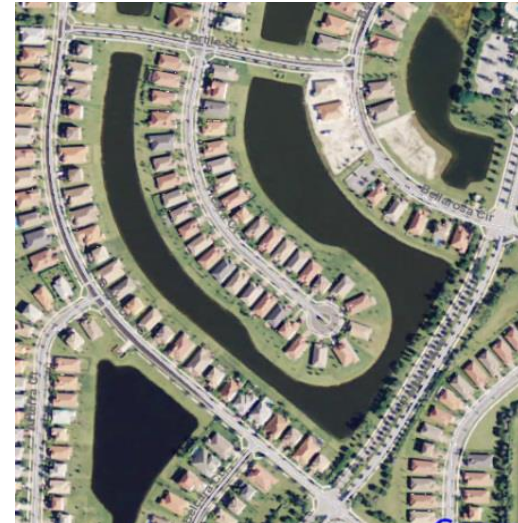
Interactive Review: Identifying Stability

2008 Imagery

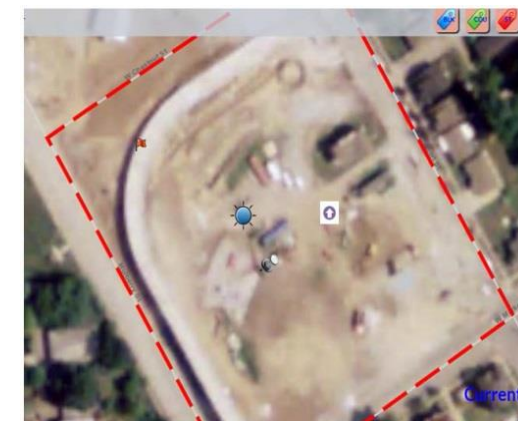
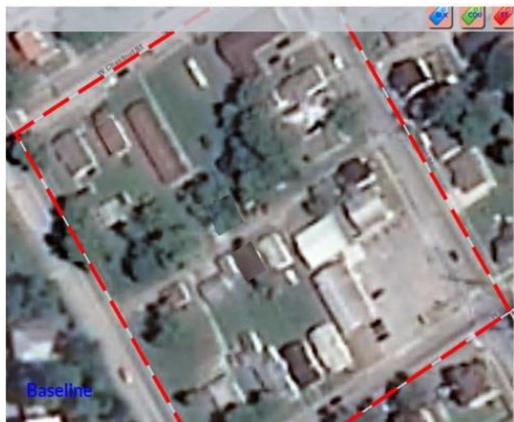


Growth

Current Imagery



Decline

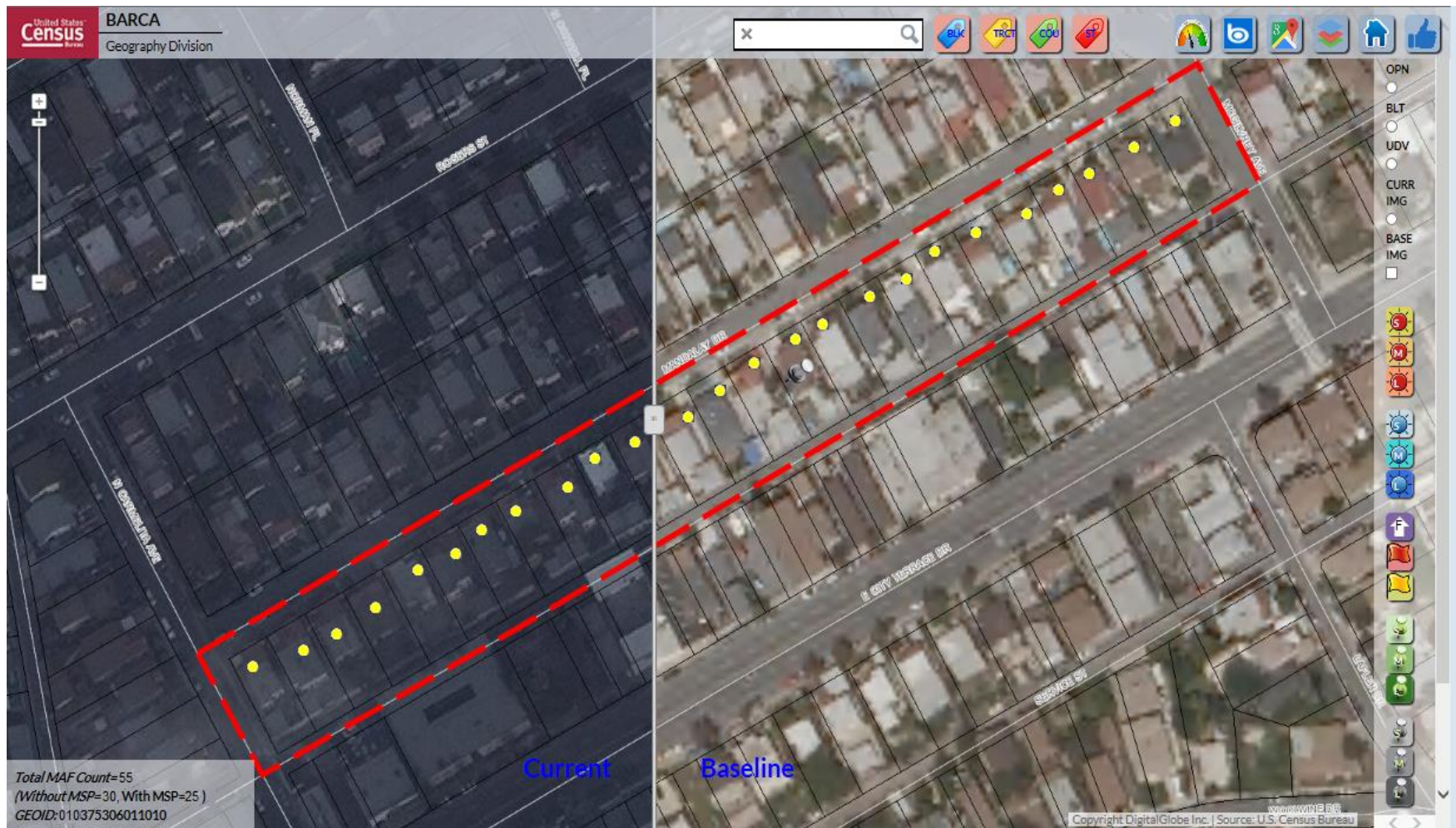


Interactive Review: Under-coverage



Imagery review identifies discrepancy between the MAF and imagery; updates are clustered in a portion of the block

Interactive Review: Over-coverage



This graphic contains no Title 13 data

In-Field Address Canvassing

Blocks requiring update that cannot be resolved during In-Office Address Canvassing are sent to In-Field Address Canvassing. The Census Bureau currently estimates blocks containing no more than 30 percent of the addresses will be sent to In-Field Address Canvassing.

Analysis of the results of In-Office Address Canvassing and coverage studies will be used to further refine the In-Field Address Canvassing estimate

In-Field Address Canvassing: Listing and Mapping Application (LiMA)

The screenshot displays the LiMA application interface. On the left is a sidebar with a 'Training Mode' header and 'St. 88 Cnty. 008 Tr. 000400'. It includes 'Quit' and 'Finish' buttons, a 'Block 00006100' selector, and a table of 12 rows of address data. The table has columns for address, housing unit, and structure type. Below the table is an 'Add' button. The main area shows a map with a highlighted block (00006100) and several white circular markers. The map includes labels for 'ALBIN RD', 'WEBSTER ST', and 'PLATO CDP'. A scale bar indicates 2000' and 500m. At the bottom of the map are buttons for 'Center on YAH!' (a red bullseye icon), 'Show Block' (a download icon), and 'Map Settings' (a gear icon).

Address	Housing Unit	Structure Type
1350 Albin Rd		SINGLE FAMILY HOME
1400 Albin Rd , 99995 (4)		MULTI UNIT STRUCTURE
810 Chamber River		SINGLE FAMILY HOME
815 Chamber River Rd , 99995		SINGLE FAMILY HOME
820 Chamber River Rd , 99995		SINGLE FAMILY HOME
830 Chamber River Rd		SINGLE FAMILY HOME
835 Chamber River Rd		SINGLE FAMILY HOME
845 Chamber River Rd		SINGLE FAMILY HOME
840 Chamber River St , 99995		SINGLE FAMILY HOME
1120 Old Prudhomme Rd , 99995		

Note: Screenshot contains test data.

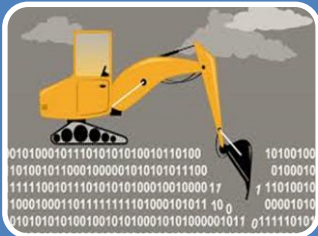
Future Innovation:

Change Detection



Delivery Sequence File (DSF)

- Address Inventory triggers from latest DSF with enhanced Line Of Travel (eLOT) to locate new addresses.



Data Mining

- Data mining from local partners – identify change in partner files through metadata (i.e., address/feature file update & vintage change)



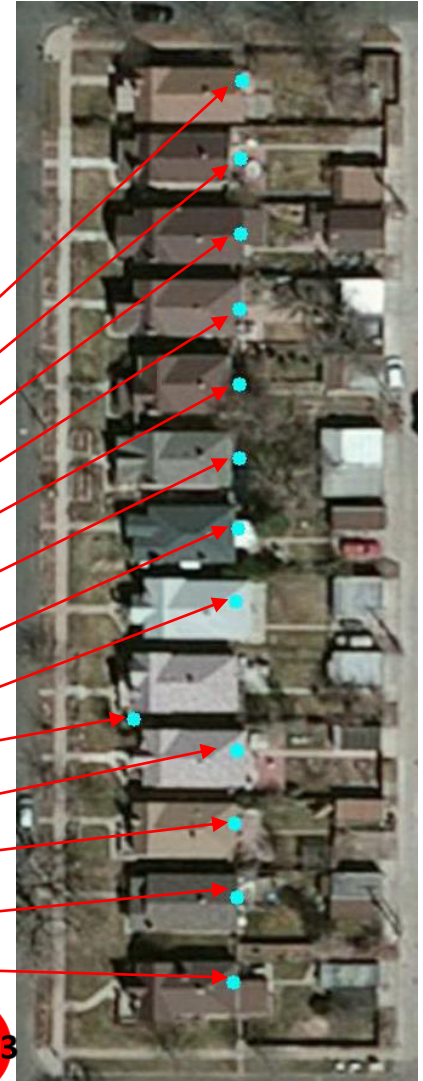
Imagery

- Remote sensing triggers for areas where new development occurs – structures & roads.

Delivery Sequence File (DSF):

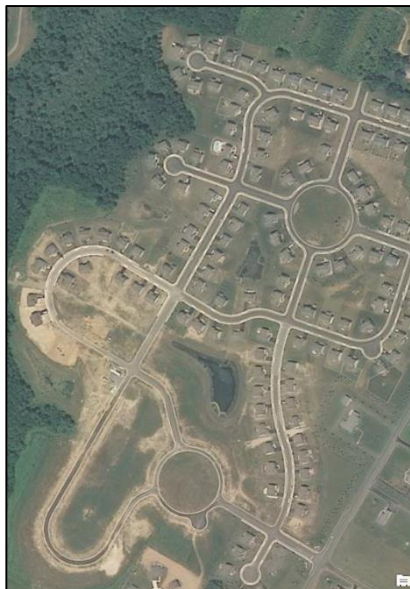
DSF-USPS eLOT®

SEQUENCE	DSF_LOW_HN	DSF_STREET	DSF_SUBTYPE
55532C05100220416	3900	KIERAN	ST
55532C05100220417	3912	KIERAN	ST
55532C05100220418	3916	KIERAN	ST
55532C05100220419	3920	KIERAN	ST
55532C05100220420	3930	KIERAN	ST
55532C05100220421	3934	KIERAN	ST
55532C05100220422	4000	KIERAN	ST
55532C05100220423	4008	KIERAN	ST
55532C05100220424	4010	KIERAN	ST
55532C05100220425	4022	KIERAN	ST
55532C05100220426	4026	KIERAN	ST
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55532C05100220428	4036	KIERAN	ST

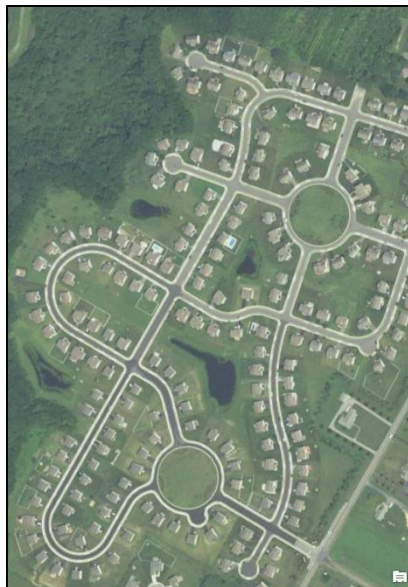


Imagery:

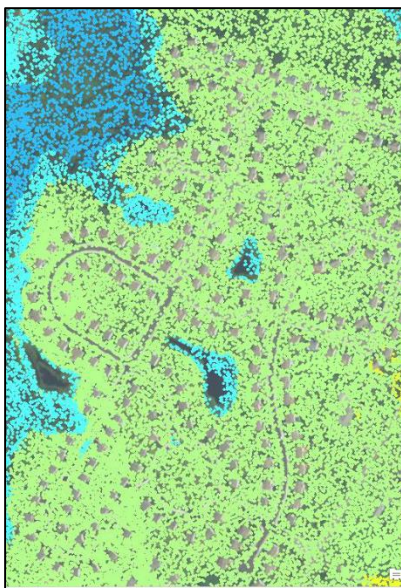
LiDAR + Imagery = Change Detection



2011 NAIP Imagery



2016 NAIP Imagery



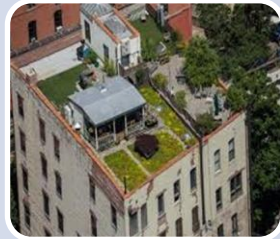
2016 LiDAR Point Cloud



Building footprints
created and compared
to address database

Future Innovation:

Target Updates



Hidden



Seasonal



Group
Quarters



Non-
Delivery



Thank You!

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